Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented):

   A router for routing a packet belonging to a virtual private network (VPN) and having a label that includes a virtual private network identifier (VPN-ID) according to the Multiprotocol Label Switching (MPLS) standard, the router comprising:

   a) a first table associated with the VPN, from among one or more separate tables, each table associated with a different VPN; and

   b) a processor for routing the packet based on an association between the VPN-ID and the first table.

2. (original):

   The router as recited by claim 1 wherein in the table is a route table.

3. (original):

   The router as recited by claim 1 wherein the table is a forwarding table.

4. (cancelled)

5. (previously presented):

   The router as recited by claim 1 further having a port for transmitting said packet.

6. (cancelled)

7. (previously presented):

    The router as recited by claim 1 wherein the label further includes a forwarding label.

8. (previously presented):

    A method of routing a packet in a network, the packet belonging to a virtual private network (VPN) and having a label that includes a virtual private network identifier (VPN-ID) according to the Multiprotocol Label Switching (MPLS) standard, the method comprising:

    a) maintaining a first table corresponding to a first virtual private network;

    b) maintaining a second table corresponding to a second virtual private network; and

    c) routing the packet based on an association between the VPN-ID and one of the first table and the second table.

9. (original):

    The method as recited by claim 8 wherein the first table and the second table are route tables.

10. (previously presented):

    The method as recited by claim 8 wherein the first table and the second table are forwarding tables.

11. (previously presented):

> The method as recited by claim 8 further comprising maintaining a forwarding table indexable by the VPN-ID.

12.-13. (cancelled)

14. (previously presented):

> The method as recited by claim 8 wherein the label further includes a forwarding label.

15. (cancelled)

16. (previously presented):

> A method of routing a packet in a network, the packet belonging to a virtual private network (VPN) and having a label that includes a virtual private network identifier (VPN-ID) according to the Multiprotocol Label Switching (MPLS) standard, the method comprising:
>
> a) maintaining a first forwarding table corresponding to a first virtual private network;
>
> b) maintaining a second forwarding table corresponding to a second virtual private network; and
>
> c) routing the packet based on an association between the VPN-ID and one of the first forwarding table and the second forwarding table.

17.-18. (cancelled)

19. (previously presented):

The method as recited by claim 16 wherein the label further includes a forwarding

label.

20. (cancelled)

21. (previously presented):

A network comprising:

    a) a first edge router configured to route a packet through a wide area network

cloud, the packet belonging to a virtual private network (VPN) and having a

label that includes a virtual private network identifier (VPN-ID) according to

the Multiprotocol Label Switching (MPLS) standard;

    b) a backbone router configured to receive the packet and route the packet based

on a route table associated solely with the VPN-ID, from among one or more

separate route tables, each table associated with a different VPN; and

    c) a second edge router configured to receive the packet.

22. (cancelled)

23. (previously presented):

The network as recited by claim 21 wherein the label further includes a forwarding

label.

Appl. No. 09/109,343
Amdt. dated December 9, 2003
Reply to Office Action of September 24, 2003

24. (original):

The network as recited by claim 21 wherein the backbone router comprises a second

route table.

25. (previously presented):

The network as recited by claim 21 wherein the packet further includes, a second

label identifying a forwarding table corresponding to the virtual private network, the

forwarding table including a portion of the route table.

26. (previously presented):

A method of routing a packet belonging to a virtual private network (VPN) and

having a label that includes a virtual private network identifier (VPN-ID) according to the

Multiprotocol Label Switching (MPLS) standard, the method comprising:

a) receiving the packet;

b) identifying a routing table associated with the VPN from among multiple

separate routing tables associated with different VPNs; and

c) facilitating routing of the packet to the VPN.

27. (previously presented):

The method of claim 26, wherein the VPN-ID is contained in a first label in the

header.

28. (previously added):

The method of claim 26, wherein the routing of the packet is based on information in

the header.

29. (previously added):

The method of claim 27 further comprising:

identifying, from a second label, a forwarding table corresponding to the VPN,

the forwarding table including a portion of the routing table.

30. (previously added):

The method of claim 29 further comprising:

identifying, from the forwarding table, label switching information for routing the

packet to the VPN.

31. (previously added):

The method of claim 30, wherein routing of the packet is based on information in the

forwarding table.

32. (previously added):
The method of claim 26 wherein the label includes a forwarding label corresponding to a

forwarding table.

Appl. No. 09/109,343
Amdt. dated December 9, 2003
Reply to Office Action of September 24, 2003

Amendments to the Drawings:

The attached four sheets of drawings includes changes to Figs. 2, 3A, 3B, and 3C. These sheet replace the original sheets including Figs. 2-3C. In each of Figs. 2, 3A, 3B, and 3C the text "IP HEADER WITH 'REACHABILITY INFORMATION' 203" has been replaced with --IP HEADER 203 WITH 'REACHABILITY INFORMATION' 202--. These changes add the reference numeral 202 to these figures as cited in the Specification at page 3, lines 11-13.

Attachment: Replacement Sheets (4)

Docket No: 082771.P277   Page 9 of 12   JAH/phs